

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Before the Board of Patent Appeals and Interferences

In re the Application

Inventor : **Sylvie Jeannin**
Application No. : **10/076,183**
Filed : **February 14, 2002**
For : **VISUAL SUMMARY FOR SCANNING
FORWARDS AND BACKWARDS IN VIDEO
CONTENT**

APPEAL BRIEF

On Appeal from Group Art Unit 2621

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Date: **May 26, 2007**

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I. REAL PARTY IN INTEREST

The real party in interest is the assignee of the present application, Koninklijke Philips Electronics N.V., and not the party named in the above caption.

II. RELATED APPEALS AND INTERFERENCES

With regard to identifying by number and filing date all other appeals or interferences known to Appellant which will directly effect or be directly affected by or have a bearing on the Board's decision in this appeal, Appellant is not aware of any such appeals or interferences.

III. STATUS OF CLAIMS

Claims 1-22 have been presented for examination. All of these claims are pending, stand finally rejected, and form the subject matter of the present appeal.

IV. STATUS OF AMENDMENTS

In response to the Final Office Action, dated January 3, 2007, Appellant timely submitted, on February 2, 2007, arguments believed to overcome the reasons for rejecting the claims. On March 14, 2007, an Advisory Action was entered into the record. The Advisory Action stated that the response would be entered for purposes of appeal. The Advisory Action in addition provided further rationale for maintaining the rejection of the claims under 35 USC §102(e) and 35 USC §103(a). On April 3, 2007 a Notice of Appeal

was timely filed in response to the Advisory Action and this Appeal Brief is being filed, with appropriate fee, within the period of response from the date of the Notice of Appeal.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention is expressed primarily in independent claims 1, 10 and 18. Claim 1 recites a method for the automatic creation of a visual summary of video content of a video source, comprising the steps of automatic extraction of a plurality of keyframes representing scenes from a video source according to predetermined criteria to produce an initial visual summary (see page 8, lines 11-19; Fig. 1) ; assigning weights to a particular group of keyframes extracted in the automatic extraction step, representing a particular scene of the video source in the initial visual summary (see page 9, line 21- page 10, line 12; Fig. 1); refining the initial visual summary into a modified visual summary by filtering the keyframes having a lower weight assigned in the assigning weights step relative to higher-weighted keyframes from the particular group of keyframes from the particular scene of the video source (see page 10, line 14 – page 11, line 4; Fig. 1); and adjusting a keyframe display rate of the modified visual summary to correspond with a fast forward/rewind speed of the video source so that the keyframes can be displayed during fast forward/rewind of the video source (see page 11, lines 6-12; Fig. 1).

Independent claim 10 recites a method for creation of a visual summary of video content of a video source. Independent claim 9 recites a system for the automatic creation of a visual summary of video content of a video source.

The remaining claims, which depend from respective independent claims, express further aspects of the invention.

VI. GROUND FOR REJECTION TO BE REVIEWED ON APPEAL

The issue in the present matter is whether:

1. Claims 10-13 are anticipated by Sezan et al., U.S. Patent No. 6,236,395 under 35 USC 102(e)
2. Claims 1-8, 18-22 are unpatentable over U.S. Patent No. 6,728,473 by Chotoku et al. in view of U.S. Patent No. 6,335,742 by Takemoto and Sezan under 35 USC 103(a); Claims 8-9 are unpatentable over Chotoku, Takemoto and Sezan in view of EP 1085756 by Van Beek et al under 35 USC 103(a); Claims 14-17 are unpatentable over Sezan in view of U.S. Patent No. 6,100,941 by Dimitrova et al. under 35 USC 103(a).

VII. ARGUMENT

I. 35 USC §102 Rejection of Claims 10-13

Claims 10-13 are not anticipated by Sezan et al., U.S. Patent No. 6,236,395 under 35 USC 102(e), as Sezan fails to show a material element recited in the independent claims.

Claim 10 recites the limitation of “adjusting a display rate of the keyframes designated in step (a) according to a fast forward/rewind speed of the video source so that the keyframes are displayed for a predetermined time during fast forward/rewind of the video source.”

Sezan fails to show, teach or imply the limitations of: “adjusting a display rate of the keyframes designated in step (a) according to a fast forward/rewind speed of the video source so that the keyframes are displayed for a predetermined time during fast forward/rewind of the video source,” as recited in independent claim 10. Independent claims 1 and 18 recites similar limitations.

Sezan’s invention teaches providing at least one description scheme. For audio and/or video programs, a program description scheme provides information regarding the associated program: for the user, a user description scheme provides information regarding the user's preferences; and for the system, a system description scheme provides information regarding the system. The description schemes are independent of one another. The system may use a combination of the description schemes to enhance its ability to search, filter, and browse audiovisual information, see col. 1, lines 55-67.

The Advisory Action and Final Office Action cite Fig. 7-8 and Col. 13 line 65 – Col. 14 line 40 to show these limitations. Applicants respectfully disagree. In this section Sezan teaches an audiovisual description scheme using thumbnail functions as a function of category that provides a display with a set of categories on the left hand side. Selecting a particular category, such as news, provides a set of thumbnail views of different programs that are currently available for viewing. The thumbnail views are short video segments that provide an indication of the content of the respective actual

program that it corresponds with. Referring to FIG. 5, a thumbnail view of available programs in terms of channels may be displayed, if desired... Although, as noted in Fig. 7-8, “The frequency of the number of frames may be selected...,” and as shown in Fig. 7-8 the system can have a frequency of x1, x5, x10; this still does not show *adjusting a keyframe display rate* of the modified visual summary *to correspond with a fast forward/rewind speed of the video source* so that the keyframes can be displayed during fast forward/rewind of the video source, as claimed in claim 1, for example. Nothing in Sezan teaches that the frequency of keyframes is related to the speed of the video source. Sezan simply teaches that its thumbnail category scheme may be manipulated, e.g. frequency, but it is not based on the forward/rewind speed of the video source.

The Advisory Action further points to col. 12, lines 1-16 to show that the Sezan thumbnail category scheme is based on the forward/rewind speed of the video source. Applicants respectfully disagree. In particular, the Advisory Action seems to focus on the line “Browsing in the system offers capabilities that are well beyond fast forwarding and rewinding.” Even if the Sezan system has fast forwarding and rewinding functionality, Sezan in fact teaches away from there use by providing its “capabilities that are well beyond” them, e.g. its thumbnail category scheme. Moreover, nothing in this section relates the frequency of keyframes and the speed of the video source.

Accordingly, Sezan does not teach adjusting a display rate of the keyframes designated in step (a) according to a fast forward/rewind speed of the video source so that the keyframes are displayed for a predetermined time during fast forward/rewind of the video source. Sezan only uses keyframes to categorize multiple video content for display, filtering, browsing *and manipulating* etc. and not within a signal video source for

display rate adjustment. Sezan solves a different problem (e.g. browsing/searching of a video database or multiple video content from a content provider, see col. 21 line 7-44).

“Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, *arranged as in the claim*.” Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 221 USPQ 481, 485 (Fed. Cir. 1984) (emphasis added).

In this case, contrary to the statements made in the Advisory Action, Sezan fails to disclose a ” adjusting a display rate of the keyframes designated in step (a) according to a fast forward/rewind speed of the video source so that the keyframes are displayed for a predetermined time during fast forward/rewind of the video source,” as is recited in the claim.

Accordingly, Sezan cannot anticipate claims 10-13, for example, because Sezan fails to disclose each and every element recited therein.

II. 35 USC §103 Rejection of Claims 1-9, 14-22

Independent claims 1 and 18 recite the limitation of “adjusting a keyframe display rate of the modified visual summary to correspond with a fast forward/rewind speed of the video source so that the keyframes can be displayed during fast forward/rewind of the video source,” which has been shown to be not anticipated and allowable in view of the cited references and in particular Sezan. The addition of Chotoku, Takemoto, Van Beek and Dimitrova fail to cure the infirmities of Sezan. Accordingly, independent claim 1 and 18 are believed allowable for at least the same reasons as independent claim 10.

It is respectfully submitted that in order to establish a *prima facie* case of obviousness, three basic criteria must be met;

1. there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the reference teachings;
2. there must be a reasonable expectation of success; and
3. the prior art reference must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)

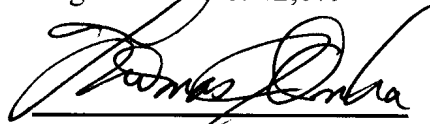
Accordingly, since the combination of Chotoku, Takemoto and Sezan., fails to teach or suggest each and every feature of the claims as required by 35 U.S.C. 103(a). Appellants respectfully submit that claims 1 and 18 are allowable.

With regard to the remaining dependent claims 2-9, 11-17 and 19-22, these claims ultimately depend from independent claims 1, 10 and 18. Applicant respectfully submits that these remaining dependent claims are allowable at least for their dependence upon allowable base claims, without even contemplating the merits of the dependent claims for reasons analogous to those held in *In re Fine*, 837 F.2d 1071, 5 USPQ 2d 1596 (Fed. Cir. 1988) (if an independent claim is non-obvious under 35 U.S.C. §103(a), then any claim depending therefrom is non-obvious).

VIII. CONCLUSION

In view of the above analysis, it is respectfully submitted that the referenced teaching fails to render unpatentable or anticipate the subject matter of any of the present claims. Therefore, reversal of all outstanding grounds of rejection is respectfully solicited.

Respectfully submitted,
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A handwritten signature in black ink, appearing to read "Thomas J. Onka", written over a horizontal line.

Date: May 26, 2007

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IX. CLAIMS APPENDIX

The claims which are the subject of this Appeal are as follows:

Claim 1. A method for the automatic creation of a visual summary of video content of a video source, comprising the steps of:

(a) automatic extraction of a plurality of keyframes representing scenes from a video source according to predetermined criteria to produce an initial visual summary;

(b) assigning weights to a particular group of keyframes extracted in step (a) representing a particular scene of the video source in the initial visual summary;

(c) refining the initial visual summary into a modified visual summary by filtering the keyframes having a lower weight assigned in step (b) relative to higher-weighted keyframes from the particular group of keyframes from the particular scene of the video source; and

(d) adjusting a keyframe display rate of the modified visual summary to correspond with a fast forward/rewind speed of the video source so that the keyframes can be displayed during fast forward/rewind of the video source.

Claim 2. The method according to Claim 1, wherein assignment of weights in step (b) includes assigning the weights based on a relative time each of the keyframes in the particular group represents of the particular scene from the video source.

Claim 3. The method according to Claim 2, wherein the keyframes in the particular group that represent less than a predetermined threshold of time in the particular scene of the video source are filtered.

Claim 4. The method according to Claim 1, wherein the keyframe display rate is adjusted to correspond with a user-selected fast forward/rewind speed of the video source.

Claim 5. The method according to Claim 1, wherein the adjusting of the keyframe display rate in step (d) includes providing audio for the modified visual summary during fast forward/rewind.

Claim 6. The method according to Claim 1, wherein the adjusting of the keyframe display includes replacing individual keyframes by short sets of frames that capture movement in the particular scene.

Claim 7. The method according to Claim 1, wherein the weighting of the keyframes is based on user-specified interests.

Claim 8. The method according to Claim 7, wherein the user-specified interests include images of specific actors in the video source.

Claim 9. The method according to Claim 7, wherein the user-specified interests include movement of actors in the video source.

Claim 10. A method for creation of a visual summary of video content of a video source comprising the steps of:

- (a) designating a plurality of frames from a video source as keyframes;
- (b) adjusting a display rate of the keyframes designated in step (a) according to a fast forward/rewind speed of the video source so that the keyframes are displayed for a predetermined time during fast forward/rewind of the video source.

Claim 11. The method according to Claim 10, further including (c) providing an audio portion for the keyframes designated in step (a).

Claim 12. The method according to Claim 11, where the audio portion is a substitute audio portion customized to correspond to the designated keyframes.

Claim 13. The method according to Claim 11, wherein step (c) includes providing a plurality of audio portions, wherein a particular audio portion is selected to match the display rate of the keyframes in step (b).

Claim 14. The method according to Claim 10, where a portion of the designated keyframes in step (a) comprise an advertisement.

Claim 15. The method according to Claim 14, wherein the substitute audio portion comprises one of: (1) a description of the product advertised in the portion of the designated keyframes comprising the advertisement, and (2) a pronunciation of the name of the product advertised in the portion of the designated keyframes comprising an advertisement.

Claim 16. The method according to Claim 10, wherein step (a) includes providing at least one user-created alternative keyframe to the visual summary that did not originate from the video source.

Claim 17. The method according to Claim 16, wherein said at least one user-created alternative keyframe comprises an advertisement.

Claim 18. A system for the automatic creation of a visual summary of video content of a video source, comprising:

means for extraction of a plurality of keyframes representing scenes from a video source according to predetermined criteria to produce an initial visual summary;

means for assigning weights to a particular group of keyframes extracted by the means for extraction representing a particular scene of the video source in the initial visual summary;

means for refining the initial visual summary into a modified visual summary by filtering the keyframes having a lower weight relative to higher-weighted keyframes from the particular group of keyframes from the particular scene of the video source; and

means for adjusting a keyframe display rate of the modified visual summary to correspond with a fast forward/rewind speed of the video source so that the keyframes are displayed during fast forward/rewind.

Claim 19. The system according to Claim 18, wherein the means for extraction comprises manual designation of keyframes representative of the video source.

Claim 20. The system according to Claim 18, wherein the means for extraction comprises automatic extraction means.

Claim 21. The system according to Claim 18, wherein the means for assigning assigns the weights to the particular group of keyframes according to a relative time span represented by each respective keyframe.

Claim 22. The system according to Claim 21, wherein the means for adjusting the keyframe display rate adjusts the display rate according to a user-selected fast forward/rewind speed of the video source.

X. EVIDENCE APPENDIX

No further evidence is provided.

XI. RELATED PROCEEDING APPENDIX

No related proceedings are pending and, hence, no information regarding same is available.